

What is claimed:

1. A roof rack assembly for storing items above a motor vehicle having a roof and a side fixedly secured to the roof, said roof rack assembly comprising:

a pair of rails fixedly secured to the roof, said rails extending generally parallel to each other;

a tray having a first end, with opposite sides thereof slidably engaging said rails and moveable between a forward end and an aft end of said rails;

a pair of pivot arms, each of said pivot arms pivotally coupled to opposite sides of a second end of said tray linkably connecting and continuously supporting said tray to the vehicle; and

when said first end of said tray is at the forward end of said rails, said tray is in a storage position and when said first end of said tray is at the aft end, said tray is in a loading position, said tray extending over the vehicle when in said storage position and inclined relative to the vehicle when in said loading position.

2. A roof rack assembly as set forth in claim 1 further comprising mounting brackets fixedly securable to an aft end of the motor vehicle and pivotally coupled to the pivot arms, each of said mounting brackets having a stop for limiting pivotal movement of said pivot arms preventing said tray from moving beyond said loading position.

3. A roof rack assembly as set forth in claim 2 wherein said tray includes a sliding bracket extending downwardly from said first end for coupling said tray to at least one of said pair of rails.

4. A roof rack assembly as set forth in claim 3 wherein said tray includes a pivot bracket extending downwardly from said second end thereof for pivotally coupling said tray to at least one of said pair of pivot arms.

5. A roof rack assembly as set forth in claim 4 wherein said sliding bracket includes a slide pin extending out therefrom for slidably engaging said channel.

6. A roof rack assembly as set forth in claim 5 wherein said pivot bracket includes a pivot pin pivotally coupled to one of said pair of pivot arms at said receiving end thereof.

7. A roof rack assembly as set forth in claim 6 wherein said slide pin includes a roller fixedly secured thereto for enabling smooth sliding engagement of said tray along said of rails.

8. A roof rack assembly as set forth in claim 7 wherein said tray includes a pair of storage ramps disposed therealong for retaining the items in place along said tray.

9. A roof rack assembly as set forth in claim 1 further comprising a drive mechanism operatively engaging said tray effecting said movement between said storage position and said loading position.

10. A roof rack assembly as set forth in claim 9 wherein each of said rails defines a channel extending therealong.

11. A roof rack assembly as set forth in claim 10 wherein said drive mechanism includes a lead screw disposed within said channel and a circular guide threadably engaging said lead screw for moving said tray along said rails.

12. A roof rack assembly as set forth in claim 11 including a motor drivingly engaging said lead screw.

13. A roof rack assembly as set forth in claim 12 including a pivot bracket extending downwardly from said second end of said tray.

14. A roof rack assembly as set forth in claim 9 wherein at least one of said rails includes an upper housing disposed above said channel and extending along a portion thereof.

15. A roof rack assembly as set forth in claim 14 including a link arm pivotally extending between one of said rails and said tray for maintaining said tray in said loading position.

16. A roof rack assembly as set forth in claim 15 wherein said end of said link arm includes a slide bushing disposed within said upper housing and movable therealong as said sliding bracket moves along one of said rails.

17. A roof rack assembly as set forth in claim 16 including a motor operatively connected to said drive mechanism for moving said sliding bracket along one of said pair of rails.

18. A roof rack assembly as set forth in claim 9 wherein said drive mechanism includes a belt disposed within said channel.

19. A roof rack assembly as set forth in claim 18 wherein said drive mechanism includes a pair of pulleys disposed along said channel with said belt extending thereabout.